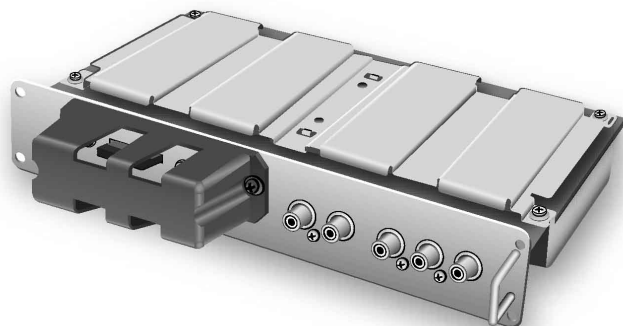


# Service Manual

## Wireless Presentation Board

**TY-FB10WPE**  
**TY-FB10WPU**



### **⚠ WARNING**

This service information is designed for experienced service personnel only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential danger in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced service personnel. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

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# 1 Safety Precautions

## 1.1. General Guidelines

1. When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
2. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.
3. After servicing, make the following leakage current checks to prevent the customer from being exposed to shock hazards.

### 1.1.1. Leakage Current Cold Check

1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
2. Measure the resistance value, with an ohmmeter, between the jumpered AC plug and each exposed metallic cabinet part on the equipment such as screwheads, connectors, control shafts, etc. When the exposed metallic part has a return path to the chassis, the reading should be between  $1M\Omega$  and  $5.2M\Omega$ .

When the exposed metal does not have a return path to the chassis, the reading must be  $\infty$ .

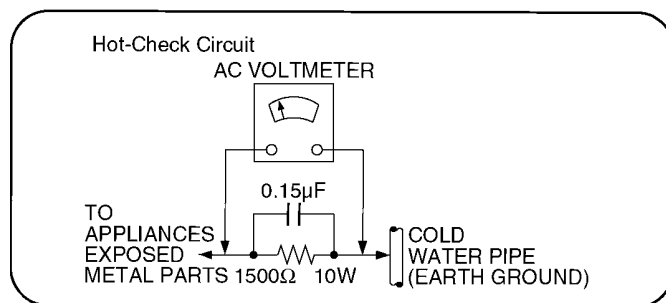


Figure 1

### 1.1.2. Leakage Current Hot Check (See Figure 1.)

1. Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
2. Connect a  $1.5k\Omega$ , 10 watts resistor, in parallel with a  $0.15\mu F$  capacitors, between each exposed metallic part on the set and a good earth ground such as a water pipe, as shown in Figure 1.
3. Use an AC voltmeter, with 1000 ohms/volt or more sensitivity, to measure the potential across the resistor.
4. Check each exposed metallic part, and measure the voltage at each point.
5. Reverse the AC plug in the AC outlet and repeat each of the above measurements.
6. The potential at any point should not exceed 0.75 volts RMS. A leakage current tester (Simpson Model 229 or equivalent) may be used to make the hot checks, leakage current must not exceed 1/2 milliamp. In case a measurement is outside of the limits specified, there is a possibility of a shock hazard, and the equipment should be repaired and rechecked before it is returned to the customer.



## 2 Prevention of Electrostatic Discharge (ESD) to Electrostatically Sensitive (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by electrostatic discharge (ESD).

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any ESD on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging ESD wrist strap, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder removal device. Some solder removal devices not classified as "anti-static (ESD protected)" can generate electrical charge sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

### Caution

Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise ham less motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity (ESD) sufficient to damage an ES device).

### IMPORTANT SAFETY NOTICE

There are special components used in this equipment which are important for safety. These parts are marked by  $\triangle$  in the schematic diagrams, Exploded Views and replacement parts list. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire, or other hazards. Do not modify the original design without permission of manufacturer.



### 3 About lead free solder (PbF)

**Note:** Lead is listed as (Pb) in the periodic table of elements.

In the information below, Pb will refer to Lead solder, and PbF will refer to Lead Free Solder.

The Lead Free Solder used in our manufacturing process and discussed below is (Sn+Ag+Cu).

That is Tin (Sn), Silver (Ag) and Copper (Cu) although other types are available.

This model uses Pb Free solder in it's manufacture due to environmental conservation issues. For service and repair work, we'd suggest the use of Pb free solder as well, although Pb solder may be used.

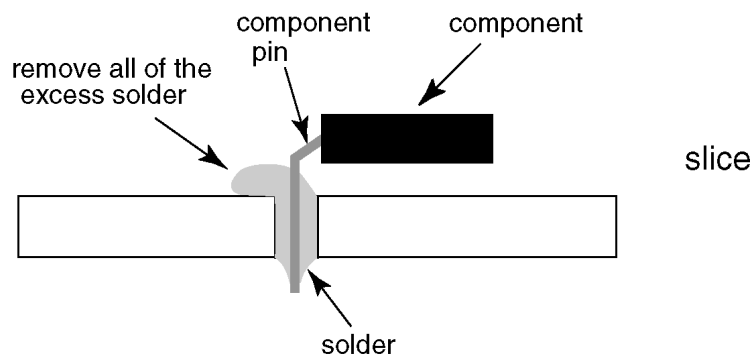
PCBs manufactured using lead free solder will have the PbF within a leaf Symbol  stamped on the back of PCB.

#### Caution

- Pb free solder has a higher melting point than standard solder. Typically the melting point is 50 ~ 70 °F (30~40°C) higher. Please use a high temperature soldering iron and set it to 700 ± 20 °F (370 ± 10 °C).
- Pb free solder will tend to splash when heated too high (about 1100 °F or 600 °C).

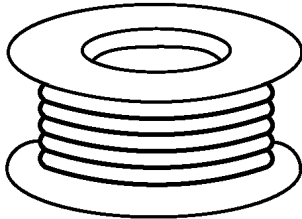
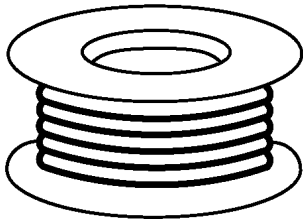
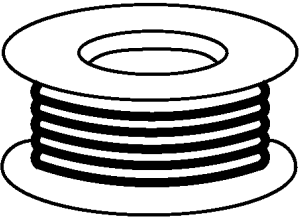
If you must use Pb solder, please completely remove all of the Pb free solder on the pins or solder area before applying Pb solder. If this is not practical, be sure to heat the Pb free solder until it melts, before applying Pb solder.

- After applying PbF solder to double layered boards, please check the component side for excess solder which may flow onto the opposite side. (see figure below)



#### Suggested Pb free solder

There are several kinds of Pb free solder available for purchase. This product uses Sn+Ag+Cu (tin, silver, copper) solder. However, Sn+Cu (tin, copper), Sn+Zn+Bi (tin, zinc, bismuth) solder can also be used.

0.3mm X 100g	0.6mm X 100g	1.0mm X 100g
		

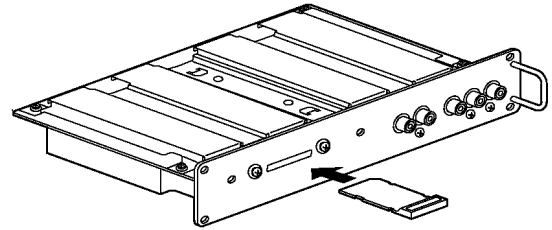


## 4 Installing and removing the wireless card/Installing and removing the unit to the display

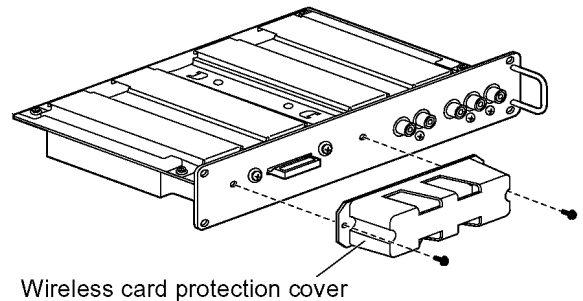
### 1 Insert the wireless card into the unit.

(Push it until a click is heard.)

When removing the card, push it until a click is heard and then remove it.



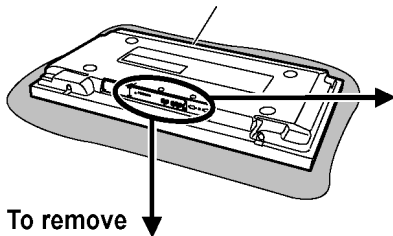
### 2 Install the wireless card protection cover with the two screws



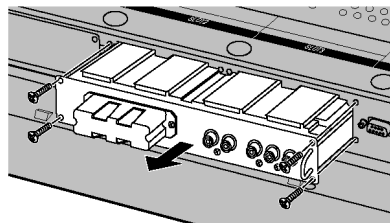
### 3 Install the unit into the slot of the display.

See Slot Nos. of the display unit that are compatible with terminal board attachments.

Foam mat or thick soft cloth



Remove the slot cover. Grip the handle of the terminal board, and slowly pull out in the direction of the arrow.



#### To install

1. Remove the slot cover.

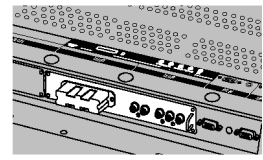
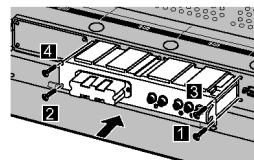
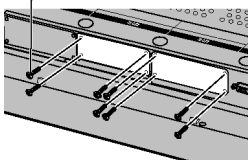
2. Insert the terminal board until it is firmly plugged into the connector.

3. Affix the terminal function label (included).

Tighten screws in the order

**1 - 4**

Securing screw



Make sure that the Board does not ride on the two lower claws.  
Be sure to fasten all screws tightly.

Have the customer keep the removed Terminal Board for future servicing needs.

#### Set the display unit according to the slot being used.

- Press the [SET UP] button on the remote control for the display unit to display the menu screen.
- Press the up/down buttons to move the cursor and select "OSD Language".
- Press the [SURROUND] button for three or more seconds to display the "Options" menu.
- Press the up/down buttons to move the cursor and select the item "Serial Slot Select" on page 3.
- Press the left/right buttons to move the cursor and select the setting that corresponds to the slots being used.

When installing in SLOT1+SLOT2: Set to "SLOT1"

When installing in SLOT2+SLOT3: Set to "SLOT2"



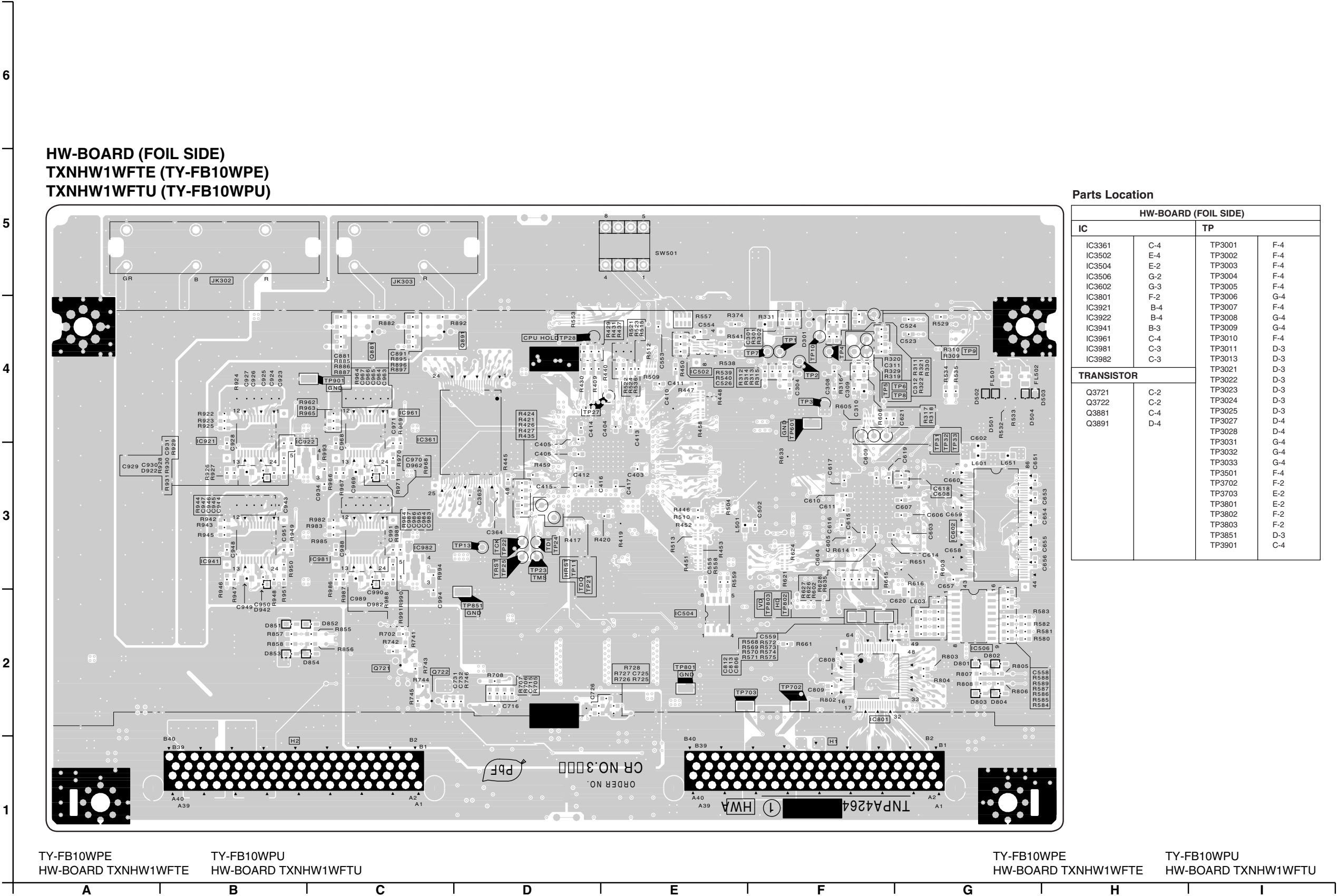
## NOTE

[illegible]



5 Circuit Board Layout

5.1. HW-Board





TY-FB10WPU  
HW-BOARD TXNHW1WFTU









# 6 Block and Schematic Diagram

## 6.1. Schematic Diagram Notes

Important Safety Notice

Components identified by  $\triangle$  mark have special characteristics important for safety.  
When replacing any of these components, use only manufacture's specified parts.

Notes:

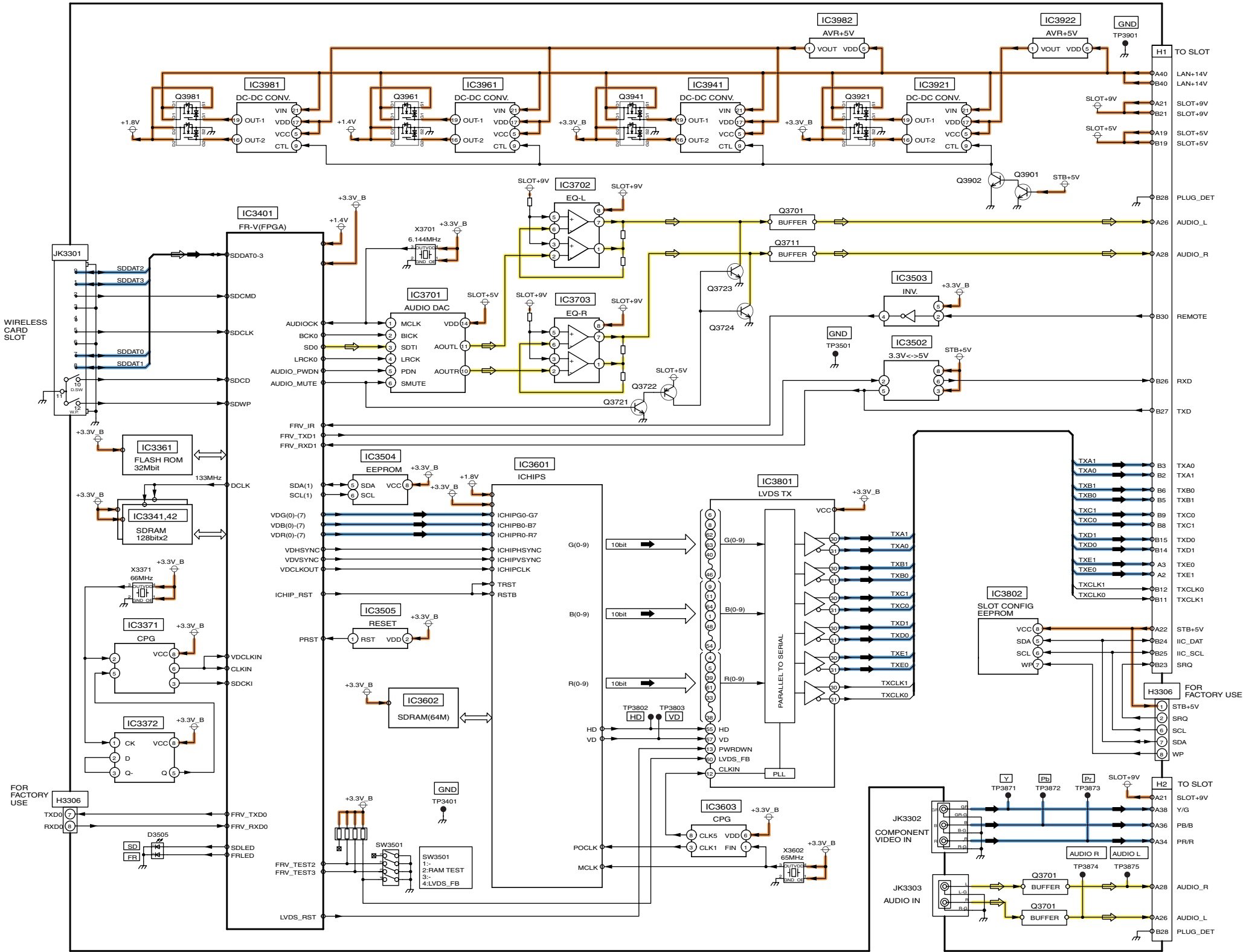
- 1. **Resistor**  
Unit of resistance is OHM [ $\Omega$ ] (K=1,000, M=1,000,000).
- 2. **Capacitor**  
Unit of capacitance is  $\mu$ F, unless otherwise noted.
- 3. Coil  
Unit of inductance is  $\mu$ H, unless otherwise noted.
- 4. Test Point  
 : Test Point position
- 5. Earth Symbol  
 : Chassis Earth (Cold)       : Line Earth (Hot)
- 6. Voltage Measurement  
Voltage is measured by a DC voltmeter.  
Conditions of the measurement are following:  
Receiving Signal ..... Colour Bar signal  
All customer's controls ..... Maximum positions
- 7. When arrow mark (  ) is found, connection is easily found from the direction of arrow.
- 8. Indicates the major signal flow.      : Video       Audio 
- 9. This schematic diagram is the latest at the time of printing and subject to change without notice.

Remarks:

- 1. The Power Circuit contains a circuit area which uses a separate power supplier to isolate the earth connection.  
The circuit is defined by HOT and COLD indications in the schematic diagram. Take the following precautions.  
All circuits, except the Power Circuit, are cold.  
Precautions
  - a. Do not touch the hot part or the hot and cold parts at the same time or you may be shocked.
  - b. Do not short- circuit the hot and cold circuits or a fuse may blow and parts may break.
  - c. Do not connect an instrument, such as an oscilloscope, to the hot and cold circuits simultaneously or a fuse may blow.  
Connect the earth of instruments to the earth connection of the circuit being measured.
  - d. Make sure to disconnect the power plug before removing the chassis.



6.2. HW-Board Block Diagram

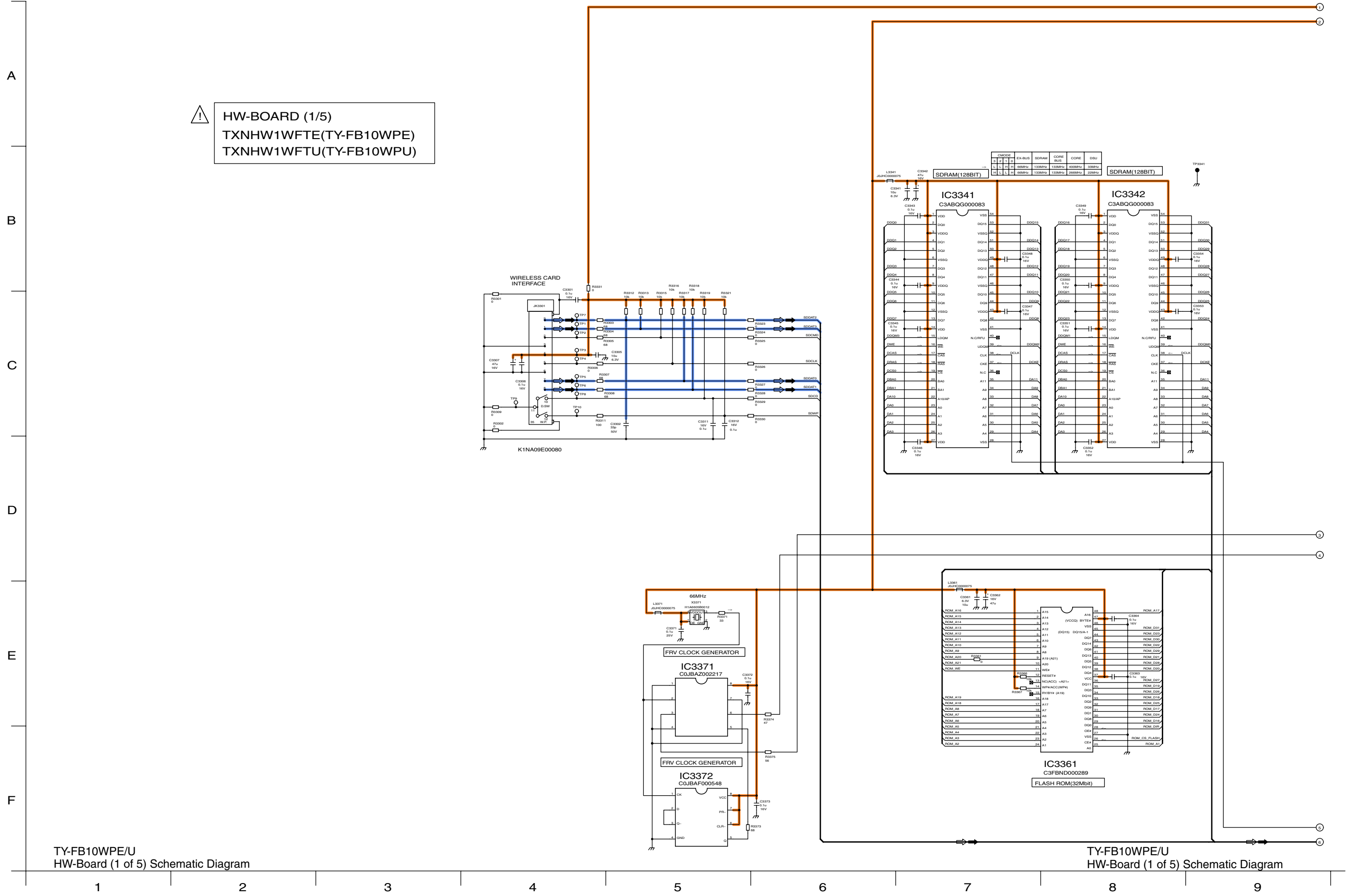


TY-FB10WPE/U  
HW-Board Block Diagram

TY-FB10WPE/U  
HW-Board Block Diagram

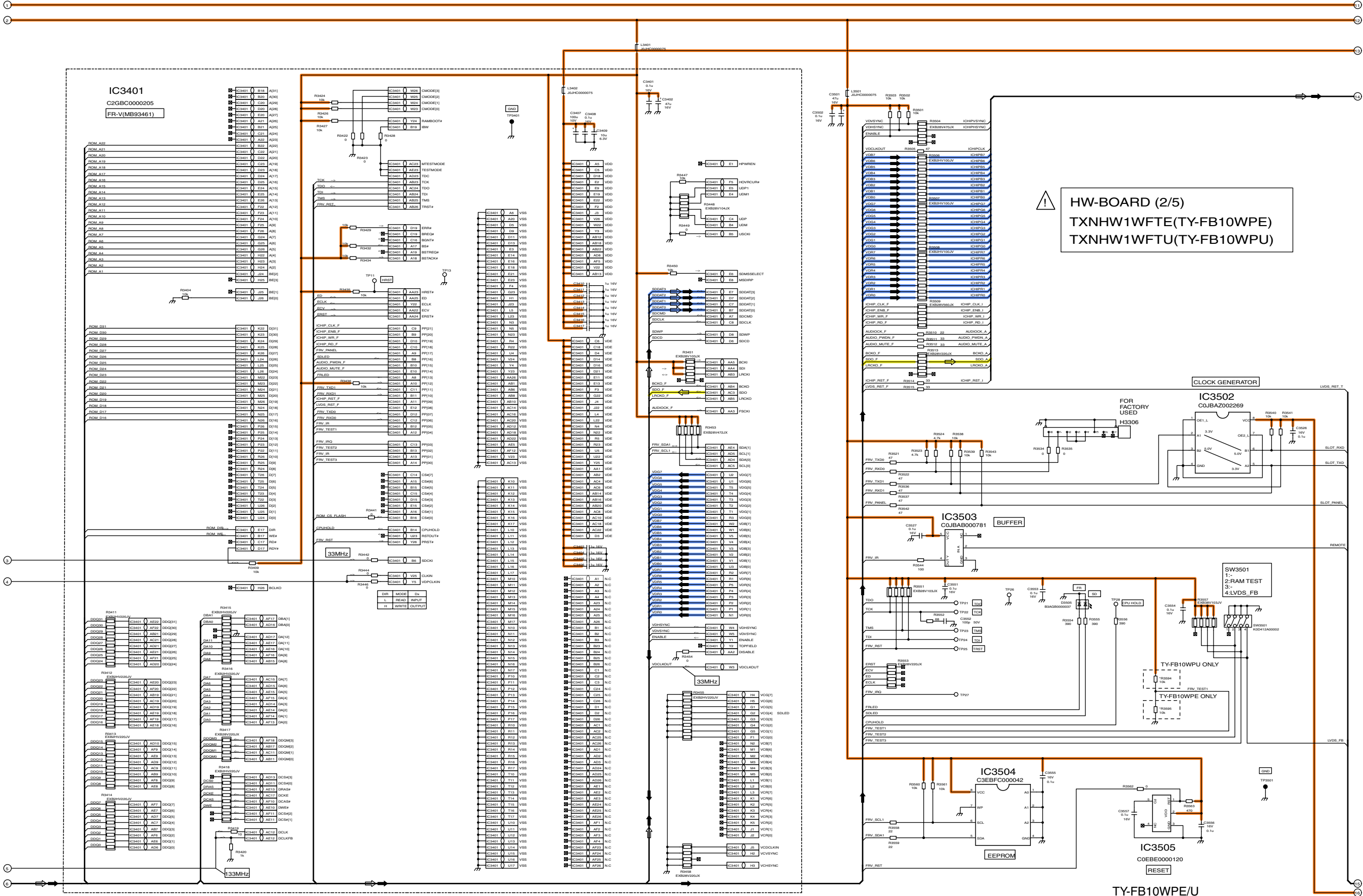


6.3. HW-Board (1 of 5) Schematic Diagram





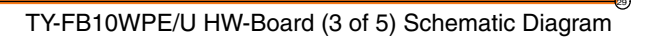
6.4. HW-Board (2 of 5) Schematic Diagram



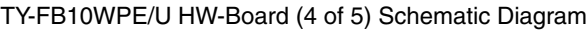
TY-FB10WPE/U HW-Board (2 of 5) Schematic Diagram

TY-FB10WPE/U HW-Board (2 of 5) Schematic Diagram





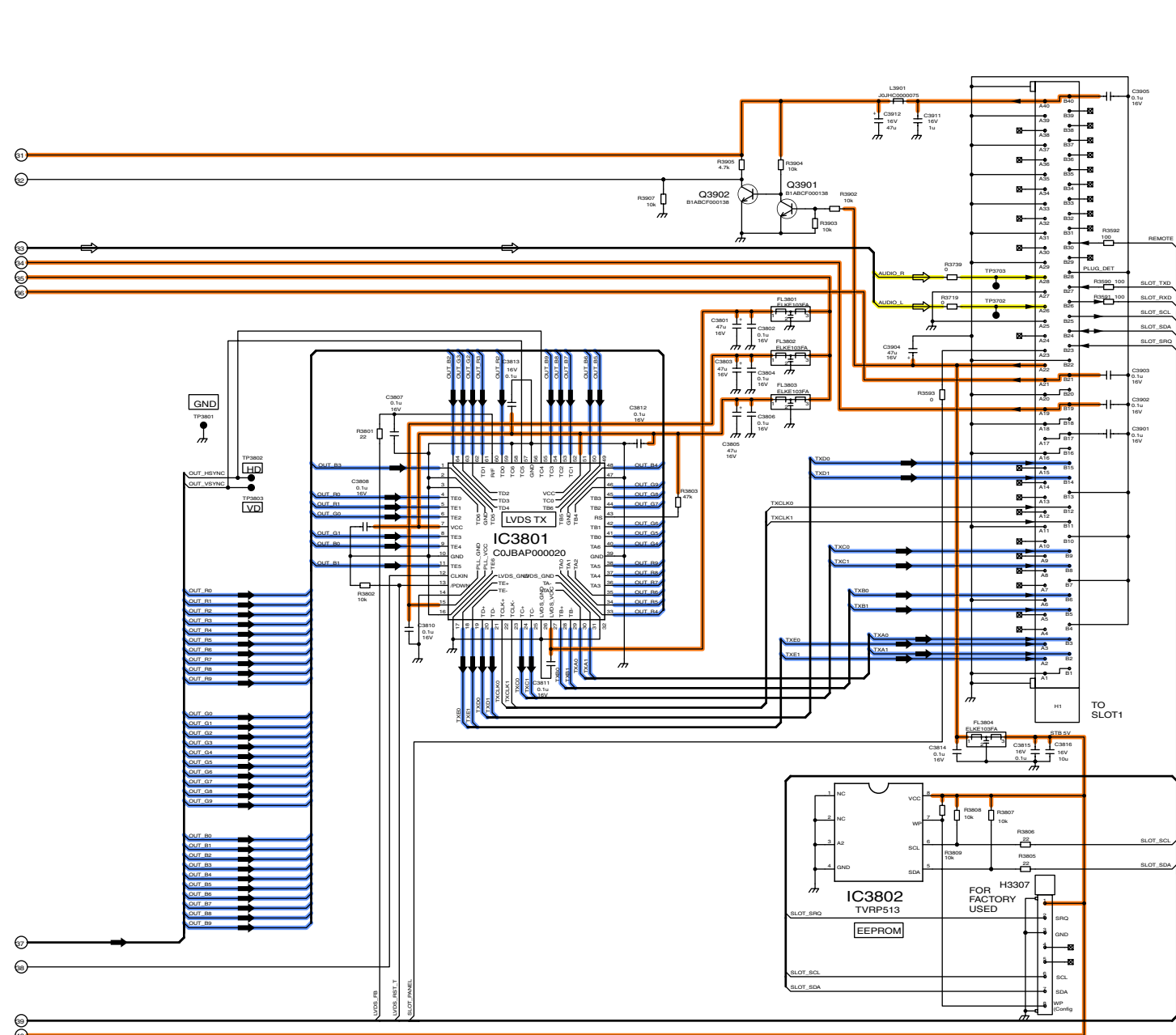




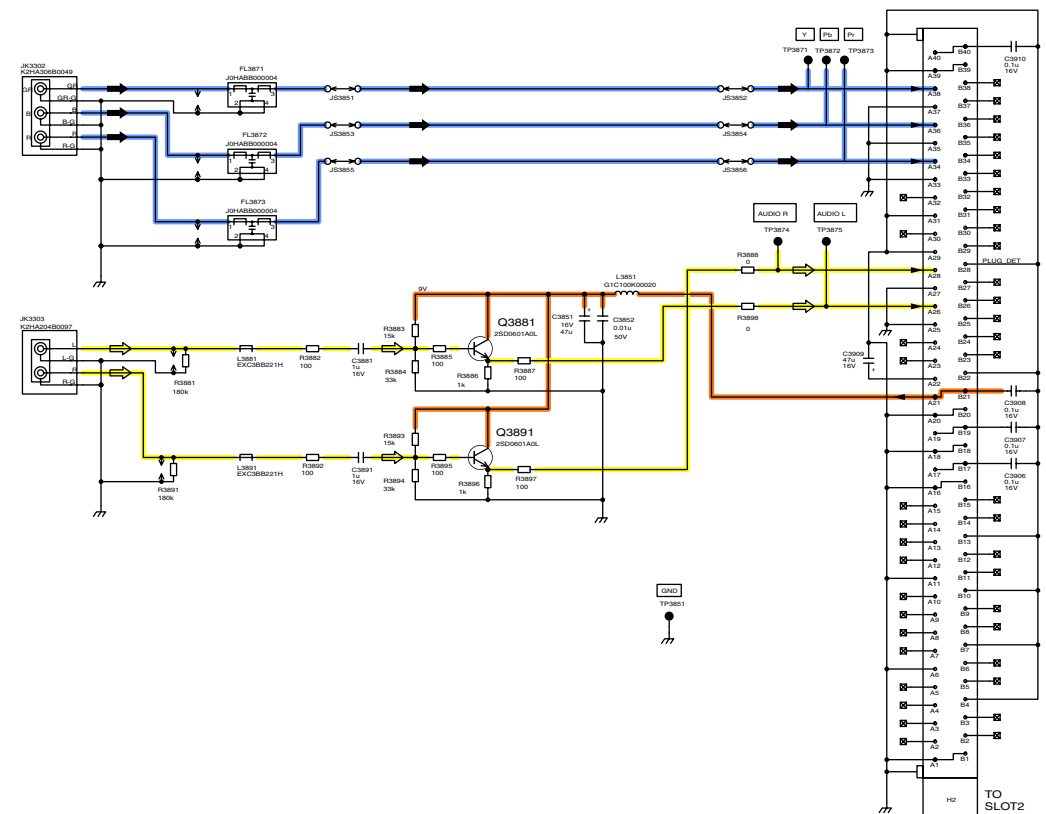


6.7. HW-Board (5 of 5) Schematic Diagram

HW-BOARD (5/5)  
TXNHW1WFTE(TY-FB10WPE)  
TXNHW1WFTU(TY-FB10WPU)



TY-FB10WPE/U HW-Board (5 of 5) Schematic Diagram



TY-FB10WPE/U HW-Board (5 of 5) Schematic Diagram



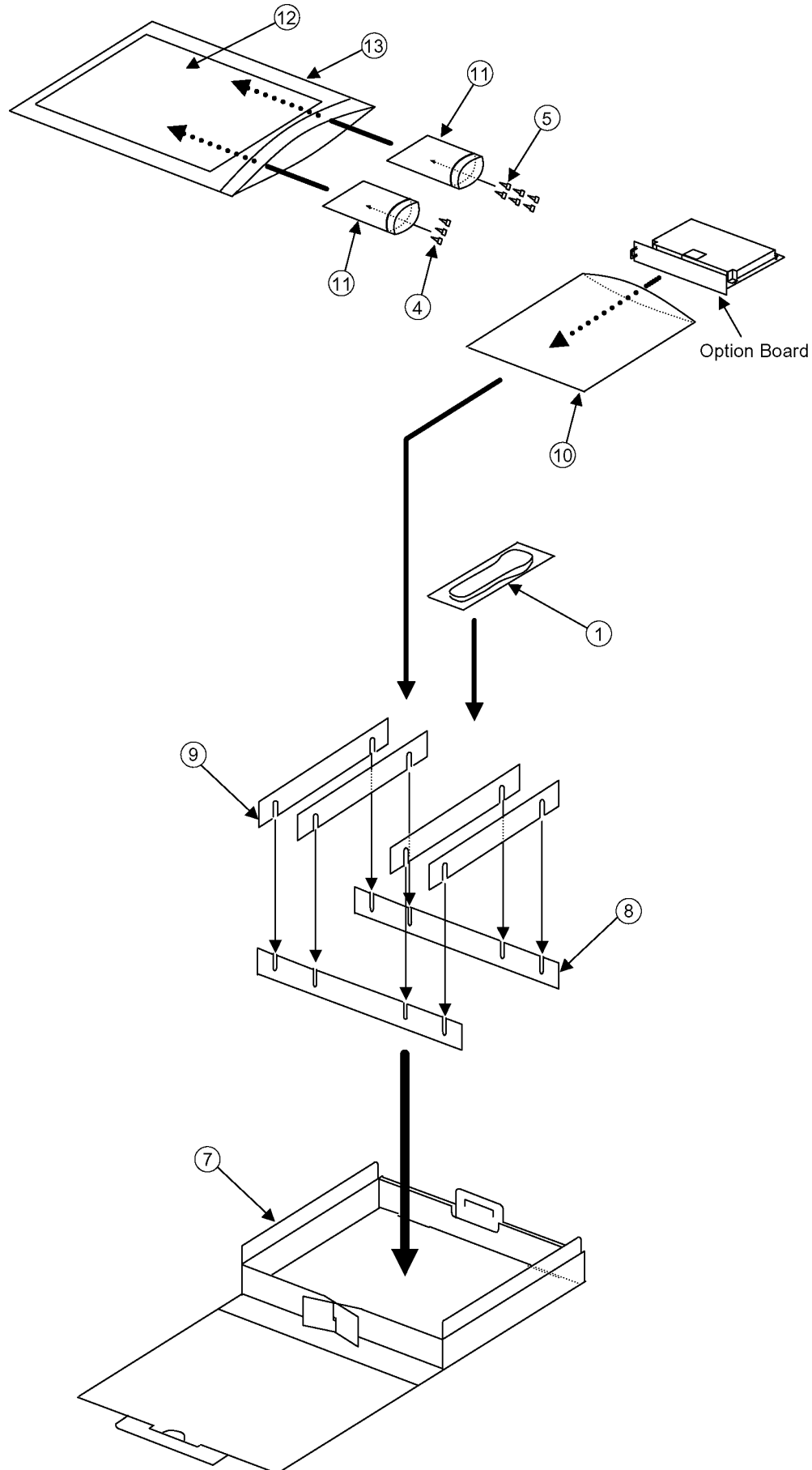
## NOTE

[illegible]



## 7 Exploded Views & Replacement Parts List

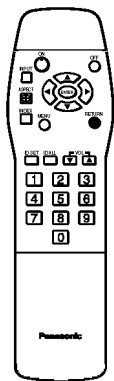
### 7.1. Packing Exploded Views





## 7.2. Accessories

### ① Remote control



### ③ Terminal function label (1 sheet)

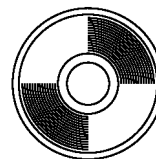


(Affix this label to applicable slot of the rear panel of the display.)

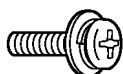
### Remote control batteries



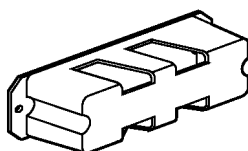
### CD-ROM disc (Wireless Manager ME. etc)



### ⑤ Screw × 6 (Slot cover cramping screw)



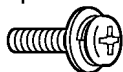
### ⑥ Wireless card protection cover



### ② Wireless card




### ④ Screw × 3 (Screws for cramping wireless card protection cover)





### 7.3. Replacement Parts List Notes

## Important Safety Notice

*Components identified by  mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.*

### RTL (Retention Time Limited)

**Note:** The marking (RTL) indicates that the Retention Time is Limited for this item.

After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retention period of availability is dependant on the type of assembly, and in accordance with the laws governing part and product retention. After the end of this period, the assembly will no longer be available.

Abbreviation of part name and description

## 1. Resistor

Example:

ERD25TJ104    C 100KOHM, J, 1/4W

Type	Allowance
------	-----------

## 2. Capacitor

Example:

ECKF1H103ZF    C    0.01UF, Z,    50V

                  Type                    Allowance

Type	Allowance
C : Carbon	F : $\pm 1\%$
F : Fuse	G : $\pm 2\%$
M : Metal Oxide	J : $\pm 5\%$
Metal Film	K : $\pm 10\%$
S : Solid	M : $\pm 20\%$
W : Wire Wound	

Type	Allowance
C : Ceramic	C : $\pm 0.25\text{pF}$
E : Electrolytic	D : $\pm 0.5\text{pF}$
P : Polyester	F : $\pm 1\text{pF}$
Polyprop	G : $\pm 3\text{pF}$
lene	J : $\pm 5\text{pF}$
T : Tantalum	K : $\pm 10\text{pF}$
	L : $\pm 15\text{pF}$
	M : $\pm 20\text{pF}$
	P : +100%, -0%
	Z : +80%, -20%



## 7.4. Mechanical Replacement Parts List

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
1	N2QAFB000004	REMOTE CONTROL	1	TY-FB10WPU
1	N2QAFB000009	REMOTE CONTROL	1	TY-FB10WPE
2	N5HZZ0000042	WIRELESS CARD	1	
3	TBMU731	TERAMINAL SHEET	1	
	THEL0239	SCREW	6	
4	XTV3+10JFJ	SCREW	3	
5	THEL027N	SCREW	6	
6	TKKL5319	PROTECTION COVER	1	
7	TPCB06814	CARTON BOX	1	TY-FB10WPE △
7	TPCB06815	CARTON BOX	1	TY-FB10WPU △
8	TPDF1137	PARTITION	2	
9	TPDF1988	PARTITION B	4	
10	TPEH135	PROTECT COVER	1	
11	TQE6691	POLY BAG	2	
12	TQZH824	INSTRUCTION BOOK (ENGLISH)	1	TY-FB10WPU △
12	TQZH893	INSTRUCTION BOOK (ENGLISH)	1	TY-FB10WPE △
12	TQZH894	INSTRUCTION BOOK (GERMAN)	1	TY-FB10WPE △
12	TQZH895	INSTRUCTION BOOK (FRENCH)	1	TY-FB10WPE △
12	TQZH896	INSTRUCTION BOOK (ITALIAN)	1	TY-FB10WPE △
12	TQZH897	INSTRUCTION BOOK (SPANISH)	1	TY-FB10WPE △
12	TQZH902	INSTRUCTION BOOK (FRENCH)	1	TY-FB10WPU △
13	XZBT6506	POLY BAG	2	
	TVD01013	CD ROM	1	



## 7.5. Electrical Replacement Parts List

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C3301	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C3302	F1G1H330A565	E 33UF, 50V	1	
C3305	F1J0J1060004	C 0.010UF, K, 16V	1	
C3306	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C3307	EEEB1C470P	C 47PF, J, 16V	1	
C3311,12	ECJ1VF1C104Z	C 0.1UF, Z, 16V	2	
C3341	F1J0J1060004	C 0.010UF, K, 16V	1	
C3342	EEEB1C470P	C 47PF, J, 16V	1	
C3343-54	ECJ1VF1C104Z	C 0.1UF, Z, 16V	12	
C3361	F1J0J1060004	C 0.010UF, K, 16V	1	
C3362	EEEB1C470P	C 47PF, J, 16V	1	
C3363,64	ECJ1VF1C104Z	C 0.1UF, Z, 16V	2	
C3371	ECJ1VB1E104K	C 0.10UF, K, 25V	1	
C3372,73	ECJ1VF1C104Z	C 0.1UF, Z, 16V	2	
C3401	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C3402	EEEB1C470P	C 47PF, J, 16V	1	
C3403-06	ECJ1XF1C105Z	C 1UF, Z, 16V	4	
C3407	EEEB1A101P	C 100PF, J, 10V	1	
C3408	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C3409	F1J0J1060004	C 0.010UF, K, 16V	1	
C3410-17	ECJ1XF1C105Z	C 1UF, Z, 16V	8	
C3501	EEEB1C470P	C 47PF, J, 16V	1	
C3502	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C3526,27	ECJ1VF1C104Z	C 0.1UF, Z, 16V	2	
C3551	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C3552	ECJ1XC1H101J	C 100PF, J, 50V	1	
C3553-57	ECJ1VF1C104Z	C 0.1UF, Z, 16V	5	
C3601	EEEB1C470P	C 47PF, J, 16V	1	
C3602	ECJ2FF1A106Z	C 0.001UF, Z, 10V	1	
C3603-11	ECJ1VF1C104Z	C 0.1UF, Z, 16V	9	
C3612	EEEB1C470P	C 47PF, J, 16V	1	
C3613	ECJ2FF1A106Z	C 0.001UF, Z, 10V	1	
C3614-19	ECJ1VF1C104Z	C 0.1UF, Z, 16V	6	
C3620	ECJ1XF1C105Z	C 1UF, Z, 16V	1	
C3651	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C3652	EEEB1C470P	C 47PF, J, 16V	1	
C3653	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C3656	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C3658,59	ECJ1VF1C104Z	C 0.1UF, Z, 16V	2	
C3661	ECJ1XF1C105Z	C 1UF, Z, 16V	1	
C3662	ECJ1VB1E104K	C 0.10UF, K, 25V	1	
C3663	ECJ1XC1H102J	C 1000PF, J, 50V	1	
C3664	ECJ1XF1C105Z	C 1UF, Z, 16V	1	
C3665	F1H1H100A831	C 10PF, K, 50V	1	
C3701	ECJ2FB0J106K	C 10UF, Z, 6.3V	1	
C3702	F1G1C104A083	C 0.10UF, K, 16V	1	
C3703	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C3704	EEEB1A101P	C 100PF, J, 10V	1	
C3705	EEEB1C470P	C 47PF, J, 16V	1	
C3706	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C3707	F2G1H100A031	E 10UF, 50V	1	
C3708	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C3709,10	F1J0J1060004	C 0.010UF, K, 16V	2	
C3711,12	EEEB1C470P	C 47PF, J, 16V	2	
C3713,14	F1G1C104A083	C 0.10UF, K, 16V	2	
C3715,16	F1H1H681A831	E 680UF, 50V	2	
C3717	EEEB1C100R	C 10PF, J, 16V	1	
C3718	F1H1H272A219	C 2700PF, K, 50V	1	
C3719	ECJ3XF1C475Z	C 4.7UF, Z, 16V	1	
C3720	F1G1C104A083	C 0.10UF, K, 16V	1	
C3723,24	F1G1C104A083	C 0.10UF, K, 16V	2	
C3725,26	F1H1H681A831	E 680UF, 50V	2	
C3727	EEEB1C100R	C 10PF, J, 16V	1	
C3728	F1H1H272A219	C 2700PF, K, 50V	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C3729	ECJ3XF1C475Z	C 4.7UF, Z, 16V	1	
C3730	F1G1C104A083	C 0.10UF, K, 16V	1	
C3731	ECJ1VB1C105K	C 0.01UF, K, 16V	1	
C3801	EEEB1C470P	C 47PF, J, 16V	1	
C3802	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C3803	EEEB1C470P	C 47PF, J, 16V	1	
C3804	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C3805	EEEB1C470P	C 47PF, J, 16V	1	
C3806-08	ECJ1VF1C104Z	C 0.1UF, Z, 16V	3	
C3810-15	ECJ1VF1C104Z	C 0.1UF, Z, 16V	6	
C3816	ECJ3XB1C106M	C 1.0UF, K, 16V	1	
C3851	EEEB1C470P	C 47PF, J, 16V	1	
C3852	ECJ1VF1H103Z	C 0.010UF, Z, 50V	1	
C3881	ECJ1XF1C105Z	C 1UF, Z, 16V	1	
C3891	ECJ1XF1C105Z	C 1UF, Z, 16V	1	
C3901-03	ECJ1VF1C104Z	C 0.1UF, Z, 16V	3	
C3904	EEEB1C470P	C 47PF, J, 16V	1	
C3905-08	ECJ1VF1C104Z	C 0.1UF, Z, 16V	4	
C3909	EEEB1C470P	C 47PF, J, 16V	1	
C3910	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C3911	ECJ1VB1C105K	C 0.01UF, K, 16V	1	
C3912	EEEB1C470P	C 47PF, J, 16V	1	
C3921,22	ECJ3YB1E106M	C 10 UF, K, 25V	2	
C3923	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C3924	ECJ1VB1H103K	C 0.001UF, K, 50V	1	
C3925	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C3926	ECJ1VC1H100C	C 10PF, C, 50V	1	
C3927	ECJ1VB1H102K	C 1000PF, K, 50V	1	
C3928	ECJ1VB1E104K	C 0.10UF, K, 25V	1	
C3929	F1J0J4750004	C 4.7UF, K, 16V	1	
C3930	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C3931	ECJ1VC1H680J	C 68PF, J, 50V	1	
C3932	ECGR10G680ER	C 68PF, J, 4V	1	
C3934	ECJ1VB1E104K	C 0.10UF, K, 25V	1	
C3941,42	ECJ3YB1E106M	C 10 UF, K, 25V	2	
C3943	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C3944	ECJ1VB1H103K	C 0.001UF, K, 50V	1	
C3945	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C3946	ECJ1VC1H100C	C 10PF, C, 50V	1	
C3947	ECJ1VB1H102K	C 1000PF, K, 50V	1	
C3948	ECJ1VB1E104K	C 0.10UF, K, 25V	1	
C3950	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C3951	ECJ1VC1H680J	C 68PF, J, 50V	1	
C3952	ECGR10G680ER	C 68PF, J, 4V	1	
C3961,62	ECJ3YB1E106M	C 10 UF, K, 25V	2	
C3963	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C3964	ECJ1VB1H103K	C 0.001UF, K, 50V	1	
C3965	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C3966	ECJ1XC1H470J	C 47PF, J, 50V	1	
C3967	ECJ1VB1H472K	C 4700PF, K, 50V	1	
C3968	ECJ1VB1E104K	C 0.10UF, K, 25V	1	
C3970	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C3971	ECJ1XC1H331J	C 330PF, J, 50V	1	
C3972	ECGR10G680ER	C 68PF, J, 4V	1	
C3981,82	ECJ3YB1E106M	C 10 UF, K, 25V	2	
C3983	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C3984	ECJ1VB1H103K	C 0.001UF, K, 50V	1	
C3985	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C3986	ECJ1XC1H470J	C 47PF, J, 50V	1	
C3987	ECJ1VB1H472K	C 4700PF, K, 50V	1	
C3988	ECJ1VB1E104K	C 0.10UF, K, 25V	1	
C3989	F1J0J4750004	C 4.7UF, K, 16V	1	
C3990	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C3991	ECJ1VB1H102K	C 1000PF, K, 50V	1	
C3992	ECGR10G680ER	C 68PF, J, 4V	1	
C3994	ECJ1VB1E104K	C 0.10UF, K, 25V	1	



Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
D3505	B3AGB0000037	LED	1	
D3921	B0JCPE000004	DIODE	1	
D3922	B0JCDD000002	DIODE	1	
D3941	B0JCPE000004	DIODE	1	
D3942	B0JCDD000002	DIODE	1	
D3961	B0JCPE000004	DIODE	1	
D3962	B0JCDD000002	DIODE	1	
D3981	B0JCPE000004	DIODE	1	
D3982	B0JCDD000002	DIODE	1	
FL3801-04	ELKE103FA	NOISE FILTER	4	
FL3871-73	J0HABB000004	LC FILTER	3	
H1,H2	K1KA80B00037	80P CONNECTOR	2	
H3306,07	K1KA08AA0150	8P CONNECTOR	2	
IC3341,42	C3ABQG000083	IC	2	
IC3361	TVRP512	IC	1	
IC3371	C0JBAZ002217	IC	1	
IC3372	C0JBAF000548	IC	1	
IC3401	C2GBC0000205	IC	1	
IC3502	C0JBAZ002269	IC	1	
IC3503	C0JBAB000781	IC	1	
IC3504	C3EBFC000042	IC	1	
IC3505	C0EBE0000120	IC	1	
IC3601	C1AB00002421	IC	1	
IC3602	C3ABPJ000071	IC	1	
IC3603	C0JBAZ002431	IC	1	
IC3701	C0FBBK000038	IC	1	
IC3702,03	C0ABBB000230	IC	2	
IC3801	C0JBAP000020	IC	1	
IC3802	TVRP513	IC	1	
IC3921	C0DBAYY00054	IC	1	
IC3922	C0DBAHD00011	IC	1	
IC3941	C0DBAYY00054	IC	1	
IC3961	C0DBAYY00054	IC	1	
IC3981	C0DBAYY00054	IC	1	
IC3982	C0DBAHD00011	IC	1	
JK3301	K1NA09E00080	9P CONNECTOR	1	
JK3302	K2HA306B0049	JACK	1	
JK3303	K2HA204B0097	JACK	1	
JS3851-56	J0JCC0000100	CHIP INDUCTOR	6	
L3341	J0JCC0000241	CHIP INDUCTOR	1	
L3361	J0JCC0000241	CHIP INDUCTOR	1	
L3371	J0JCC0000241	CHIP INDUCTOR	1	
L3401,02	J0JCC0000241	CHIP INDUCTOR	2	
L3501	J0JCC0000241	CHIP INDUCTOR	1	
L3601,02	J0JCC0000241	CHIP INDUCTOR	2	
L3603	G1C100K00020	INDUCTION COIL	1	
L3651	J0JCC0000241	CHIP INDUCTOR	1	
L3661,62	J0JCC0000241	CHIP INDUCTOR	2	
L3701	J0JCC0000241	CHIP INDUCTOR	1	
L3702,03	J0JHC0000078	CHIP INDUCTOR	2	
L3851	G1C100K00020	INDUCTION COIL	1	
L3881	EXC3BB221H	BEAD CHOKE	1	
L3891	EXC3BB221H	BEAD CHOKE	1	
L3901	J0JCC0000241	CHIP INDUCTOR	1	
L3921	G1C2R2ZA0083	INDUCTION COIL	1	
L3941	G1C2R2ZA0083	INDUCTION COIL	1	
L3961	G1C3R0MA0248	INDUCTION COIL	1	
L3981	G1C1R5ZA0083	INDUCTION COIL	1	
Q3701	2SD0601ARL	TRANSISTOR	1	
Q3711	2SD0601ARL	TRANSISTOR	1	
Q3721	2SD0601ARL	TRANSISTOR	1	
Q3722	2SA207700L	TRANSISTOR	1	
Q3723,24	2SD1979STX	TRANSISTOR	2	
Q3881	2SD0601ARL	TRANSISTOR	1	
Q3891	2SD0601ARL	TRANSISTOR	1	
Q3901,02	2SD0601ARL	TRANSISTOR	2	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
Q3921	B1MBEDA00015	TRANSISTOR	1	
Q3941	B1MBEDA00015	TRANSISTOR	1	
Q3961	B1MBEDA00015	TRANSISTOR	1	
Q3981	B1MBEDA00015	TRANSISTOR	1	
R3301,02	J0JCC0000100	CHIP INDUCTOR	2	
R3303-05	ERJ3GEYJ680	M 68 OHM,J,1/16W	3	
R3306	J0JCC0000100	CHIP INDUCTOR	1	
R3307,08	ERJ3GEYJ680	M 68 OHM,J,1/16W	2	
R3309	J0JCC0000100	CHIP INDUCTOR	1	
R3311	ERJ3GEYJ101	M 100 OHM,J,1/16W	1	
R3312,13	D0GB103JA057	M 10KOHM,J,1/16W	2	
R3315-19	D0GB103JA057	M 10KOHM,J,1/16W	5	
R3321	D0GB103JA057	M 10KOHM,J,1/16W	1	
R3323-30	J0JCC0000100	CHIP INDUCTOR	8	
R3331	ERJ6GEY0R00V	M 0 OHM, 1/10W	1	
R3361	J0JCC0000100	CHIP INDUCTOR	1	
R3366,67	D0GB103JA057	M 10KOHM,J,1/16W	2	
R3371	ERJ3GEYJ330	M 33 OHM,J,1/16W	1	
R3373	ERJ3GEYJ680	M 68 OHM,J,1/16W	1	
R3374	ERJ3GEYJ470	M 47 OHM,J,1/16W	1	
R3375	ERJ3GEYJ560	M 56 OHM,J,1/16W	1	
R3404	D0GB103JA057	M 10KOHM,J,1/16W	1	
R3409	D0GB103JA057	M 10KOHM,J,1/16W	1	
R3411-16	EXB2HV220JV	RESISTOR ARRAY	6	
R3417	EXB28V220J	RESISTOR ARRAY	1	
R3418	EXB2HV220JV	RESISTOR ARRAY	1	
R3419	ERJ3GEYJ100	M 10 OHM,J,1/16W	1	
R3420	D0GB102JA057	M 1KOHM,J,1/16W	1	
R3422,23	J0JCC0000100	CHIP INDUCTOR	2	
R3424	D0GB103JA057	M 10KOHM,J,1/16W	1	
R3426,27	D0GB103JA057	M 10KOHM,J,1/16W	2	
R3428	J0JCC0000100	CHIP INDUCTOR	1	
R3429	D0GB103JA057	M 10KOHM,J,1/16W	1	
R3432	D0GB103JA057	M 10KOHM,J,1/16W	1	
R3434-36	D0GB103JA057	M 10KOHM,J,1/16W	3	
R3441,42	J0JCC0000100	CHIP INDUCTOR	2	
R3444	J0JCC0000100	CHIP INDUCTOR	1	
R3446	J0JCC0000100	CHIP INDUCTOR	1	
R3447	D0GB103JA057	M 10KOHM,J,1/16W	1	
R3448	EXB28V104JX	RESISTOR ARRAY	1	
R3449	J0JCC0000100	CHIP INDUCTOR	1	
R3450	D0GB103JA057	M 10KOHM,J,1/16W	1	
R3451	EXB28V103JX	RESISTOR ARRAY	1	
R3453	EXB28V472JX	RESISTOR ARRAY	1	
R3454	J0JCC0000100	CHIP INDUCTOR	1	
R3455	EXB2HV220JV	RESISTOR ARRAY	1	
R3458	EXB28V220J	RESISTOR ARRAY	1	
R3501-03	D0GB103JA057	M 10KOHM,J,1/16W	3	
R3504	EXB28V470JX	RESISTOR ARRAY	1	
R3505	ERJ3GEYJ470	M 47 OHM,J,1/16W	1	
R3506-08	D1HG1008A002	NETWORK RESISTER	3	
R3509	EXB28V560JX	RESISTOR ARRAY	1	
R3510	ERJ3GEYJ220	M 22 OHM,J,1/16W	1	
R3511,12	ERJ3GEYJ330	M 33 OHM,J,1/16W	2	
R3513	EXB28V220J	RESISTOR ARRAY	1	
R3514,15	ERJ3GEYJ330	M 33 OHM,J,1/16W	2	
R3521,22	ERJ3GEYJ470	M 47 OHM,J,1/16W	2	
R3523,24	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	2	
R3534,35	J0JCC0000100	CHIP INDUCTOR	2	
R3536,37	ERJ3GEYJ470	M 47 OHM,J,1/16W	2	
R3538-41	D0GB103JA057	M 10KOHM,J,1/16W	4	
R3542	ERJ3GEYJ470	M 47 OHM,J,1/16W	1	
R3543	D0GB103JA057	M 10KOHM,J,1/16W	1	
R3544	ERJ3GEYJ101	M 100 OHM,J,1/16W	1	
R3551	EXB28V103JX	RESISTOR ARRAY	1	
R3552	ERJ3GEYJ680	M 68 OHM,J,1/16W	1	
R3553	EXB28V220J	RESISTOR ARRAY	1	
R3554-56	ERJ3GEYJ391	M 390 OHM,J,1/16W	3	
R3557	EXB38V103JV	RESISTOR ARRAY	1	



Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R3558,59	ERJ3GEYJ220	M 22 OHM,J,1/16W	2	
R3560,61	D0GB103JA057	M 10KOHM,J,1/16W	2	
R3562	J0JCC0000100	CHIP INDUCTOR	1	
R3563	ERJ3GEYJ471	M 470 OHM,J,1/16W	1	
R3590-92	ERJ3GEYJ101	M 100 OHM,J,1/16W	3	
R3593	J0JCC0000100	CHIP INDUCTOR	1	
R3594	D0GB103JA057	M 10KOHM,J,1/16W	1	TY-FB10WPU
R3595	D0GB103JA057	M 10KOHM,J,1/16W	1	TY-FB10WPE
R3601	ERJ3GEYJ681	M 680 OHM,J,1/16W	1	
R3603	J0JCC0000100	CHIP INDUCTOR	1	
R3605	EXB28V103JX	RESISTOR ARRAY	1	
R3607-13	D1HG1038A002	NETWORK RESISTER	7	
R3614	J0JCC0000100	CHIP INDUCTOR	1	
R3616	ERJ3GEYJ560	M 56 OHM,J,1/16W	1	
R3617-25	EXB28V470JX	RESISTOR ARRAY	9	
R3626,27	ERJ3GEYJ560	M 56 OHM,J,1/16W	2	
R3628	ERJ3GEYJ681	M 680 OHM,J,1/16W	1	
R3630	ERJ3GEYJ220	M 22 OHM,J,1/16W	1	
R3632	ERJ3GEYJ220	M 22 OHM,J,1/16W	1	
R3651	D0GB102JA057	M 1KOHM,J,1/16W	1	
R3661	ERJ3GEYJ681	M 680 OHM,J,1/16W	1	
R3662	ERJ3GEYJ220	M 22 OHM,J,1/16W	1	
R3663,64	ERJ3GEYJ681	M 680 OHM,J,1/16W	2	
R3665	ERJ3GEYJ220	M 22 OHM,J,1/16W	1	
R3666,67	ERJ3GEYJ560	M 56 OHM,J,1/16W	2	
R3701	ERJ3GEYJ220	M 22 OHM,J,1/16W	1	
R3702	ERJ3GEYJ330	M 33 OHM,J,1/16W	1	
R3703,04	D0GB103JA057	M 10KOHM,J,1/16W	2	
R3705	ERJ3EKF3302	M 33KOHM, 1/16W	1	
R3706	ERJ3GEYJ223	M 22KOHM,J,1/16W	1	
R3707	ERJ3EKF3302	M 33KOHM, 1/16W	1	
R3708	ERJ3EKF1802	M 18KOHM, 1/16W	1	
R3709,10	ERJ3EKF2202	M 22KOHM, 1/16W	2	
R3711	ERJ3GEYJ561	M 560 OHM,J,1/16W	1	
R3713	D0GB184JA057	M 180KOHM,J,1/16W	1	
R3714	ERJ3GEYJ471	M 470 OHM,J,1/16W	1	
R3715,16	D0GB473JA057	M 47KOHM,J,1/16W	2	
R3717	ERJ6GEYG102	M 1KOHM,J,1/10W	1	
R3718	ERJ6GEYJ101V	M 100 OHM,J,1/10W	1	
R3719	J0JCC0000100	CHIP INDUCTOR	1	
R3725	ERJ3EKF3302	M 33KOHM, 1/16W	1	
R3726	ERJ3GEYJ223	M 22KOHM,J,1/16W	1	
R3727	ERJ3EKF3302	M 33KOHM, 1/16W	1	
R3728	ERJ3EKF1802	M 18KOHM, 1/16W	1	
R3729,30	ERJ3EKF2202	M 22KOHM, 1/16W	2	
R3731	ERJ3GEYJ561	M 560 OHM,J,1/16W	1	
R3733	D0GB184JA057	M 180KOHM,J,1/16W	1	
R3734	ERJ3GEYJ471	M 470 OHM,J,1/16W	1	
R3735,36	D0GB473JA057	M 47KOHM,J,1/16W	2	
R3737	ERJ6GEYG102	M 1KOHM,J,1/10W	1	
R3738	ERJ6GEYJ101V	M 100 OHM,J,1/10W	1	
R3739	J0JCC0000100	CHIP INDUCTOR	1	
R3741,42	D0GB103JA057	M 10KOHM,J,1/16W	2	
R3743	D0GB473JA057	M 47KOHM,J,1/16W	1	
R3744,45	D0GB103JA057	M 10KOHM,J,1/16W	2	
R3746	D0GB105JA057	M 1MOHM,J,1/16W	1	
R3747,48	ERJ3GEYJ331	M 330 OHM,J,1/16W	2	
R3801	ERJ3GEYJ220	M 22 OHM,J,1/16W	1	
R3802	D0GB103JA057	M 10KOHM,J,1/16W	1	
R3803	D0GB473JA057	M 47KOHM,J,1/16W	1	
R3805,06	ERJ3GEYJ220	M 22 OHM,J,1/16W	2	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R3807-09	D0GB103JA057	M 10KOHM,J,1/16W	3	
R3881	ERJ6GEYJ184	M 180KOHM,J,1/10W	1	
R3882	ERJ3GEYJ101	M 100 OHM,J,1/16W	1	
R3883	ERJ3GEYD153V	M 15KOHM,J,1/16W	1	
R3884	ERJ3GEYJ333	M 33KOHM,J,1/16W	1	
R3885	ERJ3GEYJ101	M 100 OHM,J,1/16W	1	
R3886	D0GB102JA057	M 1KOHM,J,1/16W	1	
R3887	ERJ3GEYJ101	M 100 OHM,J,1/16W	1	
R3888	J0JCC0000100	CHIP INDUCTOR	1	
R3891	ERJ6GEYJ184	M 180KOHM,J,1/10W	1	
R3892	ERJ3GEYJ101	M 100 OHM,J,1/16W	1	
R3893	ERJ3GEYD153V	M 15KOHM,J,1/16W	1	
R3894	ERJ3GEYJ333	M 33KOHM,J,1/16W	1	
R3895	ERJ3GEYJ101	M 100 OHM,J,1/16W	1	
R3896	D0GB102JA057	M 1KOHM,J,1/16W	1	
R3897	ERJ3GEYJ101	M 100 OHM,J,1/16W	1	
R3898	J0JCC0000100	CHIP INDUCTOR	1	
R3902-04	D0GB103JA057	M 10KOHM,J,1/16W	3	
R3905	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	1	
R3907	D0GB103JA057	M 10KOHM,J,1/16W	1	
R3921	ERJ6GEY0R00V	M 0 OHM, 1/10W	1	
R3922	ERJ3EKF5102	M51.0KOHM, 1/16W	1	
R3923	ERJ3EKF2702V	M27.0KOHM, 1/16W	1	
R3924	ERJ3GEYJ104	M 100KOHM,J,1/16W	1	
R3925,26	J0JCC0000100	CHIP INDUCTOR	2	
R3928	ERJ3EKF3602	M 36KOHM, 1/16W	1	
R3929	ERJ3EKF4752	M47.5KOHM, 1/16W	1	
R3930	ERJ3EKF1272	M12.7KOHM, 1/16W	1	
R3931	J0JCC0000100	CHIP INDUCTOR	1	
R3932	ERJ6GEY0R00V	M 0 OHM, 1/10W	1	
R3941	ERJ6GEY0R00V	M 0 OHM, 1/10W	1	
R3942	ERJ3EKF5102	M51.0KOHM, 1/16W	1	
R3943	ERJ3EKF2702V	M27.0KOHM, 1/16W	1	
R3944	ERJ3GEYJ104	M 100KOHM,J,1/16W	1	
R3945,46	J0JCC0000100	CHIP INDUCTOR	2	
R3948	ERJ3EKF3602	M 36KOHM, 1/16W	1	
R3949	ERJ3EKF4752	M47.5KOHM, 1/16W	1	
R3950	ERJ3EKF1272	M12.7KOHM, 1/16W	1	
R3951	J0JCC0000100	CHIP INDUCTOR	1	
R3952	ERJ6GEY0R00V	M 0 OHM, 1/10W	1	
R3961	ERJ6GEY0R00V	M 0 OHM, 1/10W	1	
R3962	ERJ3EKF5102	M51.0KOHM, 1/16W	1	
R3963	ERJ3EKF2002	M 20KOHM, 1/16W	1	
R3964	ERJ3GEYJ104	M 100KOHM,J,1/16W	1	
R3965,66	J0JCC0000100	CHIP INDUCTOR	2	
R3968	ERJ3EKF6802	M 68KOHM, 1/16W	1	
R3969,70	ERJ3EKF2102	M21.0KOHM, 1/16W	2	
R3971	J0JCC0000100	CHIP INDUCTOR	1	
R3972	ERJ6GEY0R00V	M 0 OHM, 1/10W	1	
R3981	ERJ6GEY0R00V	M 0 OHM, 1/10W	1	
R3982	ERJ3EKF4302	M 43KOHM, 1/16W	1	
R3983	ERJ3EKF3902	M 39KOHM, 1/16W	1	
R3984	ERJ3GEYJ104	M 100KOHM,J,1/16W	1	
R3985,86	J0JCC0000100	CHIP INDUCTOR	2	
R3988	ERJ3EKF3302	M 33KOHM, 1/16W	1	
R3989	ERJ3EKF3602	M 36KOHM, 1/16W	1	
R3990	ERJ3EKF2202	M 22KOHM, 1/16W	1	
R3991	ERJ3EKF5600	M 560 OHM, 1/16W	1	
R3992	ERJ6GEY0R00V	M 0 OHM, 1/10W	1	
R3993,94	D0GB473JA057	M 47KOHM,J,1/16W	2	
RTL	TXNHW1WFTU	CIRCUIT BOARD HW	1	TY-FB10WPE △
RTL	TXNHW1WFTU	CIRCUIT BOARD HW	1	TY-FB10WPU △



Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
SW3501	TSE995	SWITCH	1	
X3371	H1A6605B0012	CRYSTAL	1	
X3602	H1A6505B0008	CRYSTAL	1	
X3701	H1A6144B0003	CRYSTAL	1	